

CLAIMS

1. A base material for a pattern-forming material, comprising a low molecular weight compound (X1), which is formed from a polyhydric phenol compound (x) that comprises two or more phenolic hydroxyl groups and satisfies conditions (1), (2), and (3) described below, wherein either a portion of, or all of, said phenolic hydroxyl groups are protected with acid dissociable, dissolution inhibiting groups:

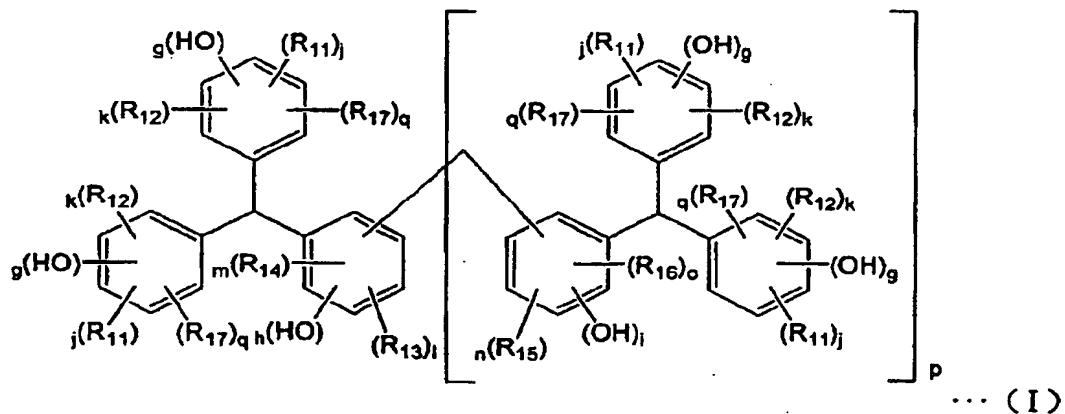
5 (1) a molecular weight within a range from 300 to 2,500, (2) a molecular weight dispersity of no more than 1.5, and (3) an ability to form an amorphous film using a spin

10 coating method.

2. A base material for a pattern-forming material according to claim 1, wherein said polyhydric phenol compound (x) is one or more compounds selected from the group consisting of polyhydric phenol compounds represented by general formulas (I), (II), and

15 (III) shown below:

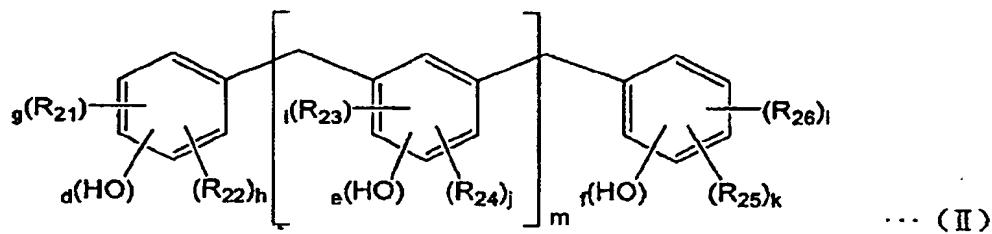
[Formula 1]



[wherein, R₁₁ through R₁₇ each represent, independently, an alkyl group or aromatic hydrocarbon group of 1 to 10 carbon atoms, and these structures may also include a

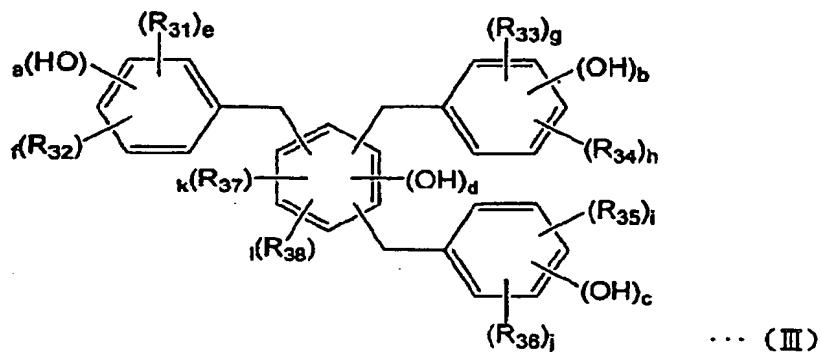
hetero atom; g and j each represent, independently, an integer of 1 or greater, k and q each represent either 0 or an integer of 1 or greater, and g+j+k+q is no greater than 5; h is an integer of 1 or greater, l and m each represent, independently, either 0 or an integer of 1 or greater, and h+l+m is no greater than 4; i is an integer of 1 or greater, n and o each 5 represent, independently, either 0 or an integer of 1 or greater, and i+n+o is no greater than 4; and p is either 0 or 1],

[Formula 2]



[wherein, R₂₁ through R₂₆ each represent, independently, an alkyl group or aromatic 10 hydrocarbon group of 1 to 10 carbon atoms, and these structures may also include a hetero atom; d and g each represent, independently, an integer of 1 or greater, h represents either 0 or an integer of 1 or greater, and d+g+h is no greater than 5; e represents an integer of 1 or greater, i and j each represent, independently, either 0 or an integer of 1 or greater, and e+i+j is no greater than 4; f and k each represent, 15 independently, an integer of 1 or greater, l represents either 0 or an integer of 1 or greater, and f+k+l is no greater than 5; and m is an integer from 1 to 20],

[Formula 3]



[wherein, R₃₁ through R₃₈ each represent, independently, an alkyl group or aromatic hydrocarbon group of 1 to 10 carbon atoms, and these structures may also include a

5 hetero atom; a and e each represent, independently, an integer of 1 or greater, f represents either 0 or an integer of 1 or greater, and a+e+f is no greater than 5; b and h each represent, independently, an integer of 1 or greater, g represents either 0 or an integer of 1 or greater, and b+h+g is no greater than 5; c and i each represent, independently, an integer of 1 or greater, j represents either 0 or an integer of 1 or greater, and c+i+j is no
10 greater than 5; d represents an integer of 1 or greater, k and l each represent, independently, either 0 or an integer of 1 or greater, and d+k+l is no greater than 3].

3. A positive resist composition, comprising a base material component (A), which contains acid dissociable, dissolution inhibiting groups and displays increased alkali
15 solubility under action of acid, and (B) an acid generator that generates acid on exposure, wherein

said base material component (A) is a base material for a pattern-forming material according to claim 1.

4. A positive resist composition, comprising a base material component (A), which contains acid dissociable, dissolution inhibiting groups and displays increased alkali solubility under action of acid, and (B) an acid generator that generates acid on exposure, wherein

5 said base material component (A) is a base material for a pattern-forming material according to claim 2.

5. A positive resist composition according to claim 3, further comprising a nitrogen-containing organic compound (D).

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6. A method of forming a resist pattern comprising the steps of applying a positive resist composition according to claim 3 to a substrate, conducting a prebake, performing selective exposure, conducting PEB (post exposure baking), and performing alkali developing to form a resist pattern.

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7. A method of forming a resist pattern comprising the steps of applying a positive resist composition according to claim 4 to a substrate, conducting a prebake, performing selective exposure, conducting PEB (post exposure baking), and performing alkali developing to form a resist pattern.

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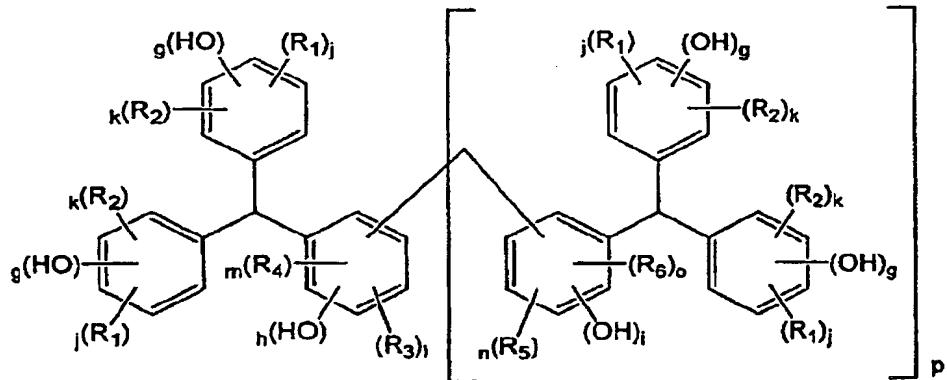
8. A base material for a pattern-forming material, comprising a protected material (Y1), which is formed from a polyhydric phenol compound (y) that comprises two or more phenolic hydroxyl groups and has a molecular weight within a range from 300 to 2,500, in which either a portion of, or all of, said phenolic hydroxyl groups are protected 25 with acid dissociable, dissolution inhibiting groups, wherein a proportion within said

base material of an unprotected material (Y2), in which said phenolic hydroxyl groups of said polyhydric phenol compound (y) are not protected with acid dissociable, dissolution inhibiting groups, is no more than 60% by weight.

5 9. A base material for a pattern-forming material according to claim 8, wherein a molecular weight dispersity (Mw/Mn) of said polyhydric phenol compound (y) is no more than 1.5.

10. A base material for a pattern-forming material according to claim 8, wherein said 10 polyhydric phenol compound (y) is a compound represented by a general formula (I) shown below:

[Formula 4]



[wherein, R₁ through R₆ each represent, independently, an alkyl group or aromatic 15 hydrocarbon group of 1 to 10 carbon atoms, and these structures may also include a hetero atom; g and j each represent, independently, an integer of 1 or greater, k represents either 0 or an integer of 1 or greater, and g+j+k is no greater than 5; h is an integer of 1 or greater, l and m each represent, independently, either 0 or an integer of 1 or greater, and h+l+m is no greater than 4; i is an integer of 1 or greater, n and o each represent,

independently, either 0 or an integer of 1 or greater, and $i+n+o$ is no greater than 4; and p is either 0 or 1].

11. A positive resist composition, comprising a base material component (A), which
5 contains acid dissociable, dissolution inhibiting groups and displays increased alkali
solubility under action of acid, and (B) an acid generator that generates acid on exposure,
wherein

10 said base material component (A) is a base material for a pattern-forming material
according to claim 8.

12. A positive resist composition, comprising a base material component (A), which
contains acid dissociable, dissolution inhibiting groups and displays increased alkali
solubility under action of acid, and (B) an acid generator that generates acid on exposure,
wherein

15 said base material component (A) is a base material for a pattern-forming material
according to claim 10.

20 13. A positive resist composition according to claim 11, further comprising a
nitrogen-containing organic compound (D).

14. A method of forming a resist pattern comprising the steps of applying a positive
resist composition according to claim 11 to a substrate, conducting a prebake, performing
selective exposure, conducting PEB (post exposure baking), and performing alkali
developing to form a resist pattern.

15. A method of forming a resist pattern comprising the steps of applying a positive resist composition according to claim 12 to a substrate, conducting a prebake, performing selective exposure, conducting PEB (post exposure baking), and performing alkali developing to form a resist pattern.